

Tooth Brush with Replaceable Bristles

FIELD OF THE INVENTION

[0001] This invention relates to a tooth brush with replaceable bristles, more particular, this invention provides a convenient replacement of a bristle part detachable from the head of a tooth brush by one-button pushing.

BACKGROUND

[0002] A tooth brush generally includes a brush handle with bristles planted on the front end or the head of the brush handle. The tooth brush with the replaceable head is well-known. Along with a detachment of the tooth brush making it easier for consumer to replace when it becomes worn or slit. However, to throw away a whole brush head is still not economical. For cost saving and oral hygiene, the bristles of the brush head should be the most frequently exchanged part. Therefore, there is a need to provide a brush head with replaceable bristles for the tooth brush.

SUMMARY

[0004] Accordingly, the present invention is to provide a brush head with replaceable bristles. When the tooth brush is worn out, one may replace only the bristles without disposing the brush head and even the tooth brush itself.

[0005] The brush head of the present invention includes a housing, a connection mechanism, a bristle part and a button. The connection mechanism is fixedly installed in the housing. The bristle part is detachably mounted to the connection mechanism. The button is movably mounted to the housing by the connection mechanism, and is capable to be pushed toward the

bristle part to dismantle the bristle part from the connection mechanism. As such, by simply pushing the button, a convenient replacement of the bristles of the tooth brush is achieved.

[0006] These and other objectives of the present invention will become obvious to those of ordinary skill in the art after reading the following detailed description of preferred embodiments.

[0007] It is to be understood that both the foregoing general description and the following detailed description are exemplary, and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] These, as well as other features of the present invention, will become apparent upon reference to the drawings wherein:

[0009] Figure 1 illustrates a perspective view of a brush head according to the present invention; and

[0010] Figure 2 illustrates a partial cross-sectional view of the assembly of a brush head according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0011] Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings. Wherever possible, the same reference numbers are used in the drawings and the description to refer to the same or like parts.

[0012] Please refer to Figures 1 and 2, a brush head for a brush tooth is shown. The brush head 10 includes a bristle part 11, a housing 12, a locking member 13, a clicking ring 14, a supporting

ring 15, a connection bolt 16, a cover 17, a spring 18 and a button. The housing 12 has a recess 121 formed on a front end for the supporting ring 15, the connection bolt 16, the cover 17 and the spring 18 to be furnished therein. Moreover, a through hole 123 is formed in the recess 121 for the connection bolt 16 passing through. In assembling, the connection bolt 16 is first inserted in the supporting ring 15 to put in the through hole 123. The connection bolt 16 has a head section 161 which is larger than a body section 163 thereof so that the supporting ring 15 is located on the body section 163 and is sandwiched between a bottom 125 of the recess and the head section 161 of the connection bolt 16. Thereafter, the clicking ring 14 is put on the body section 163 of the connection bolt 16 from the other side of the housing 12. A slit 162 is formed on the body section 163 adjacent to a foot section 165 of the connection bolt 16 so that the locking member 13 can clamp the connection bolt 16 through the slit 162 to sandwich the clicking ring 14 between the bottom 125 of the recess and the locking member 13. As such, the assembly of the locking member 13, the clicking ring 14, the supporting ring 15 and the connection bolt 16 forms a connection mechanism installed in the brush head for the bristle part 11 to be detachably mounted to the brush head thereby as described as follows.

[0013] In order to mount the bristle part 11, the bristle part 11 has a cavity 111 to receive the foot section 165 and has a plurality of columns 113 formed around the cavity 111 to clip the clicking ring 14. The foot section 165 is formed in a hexagon to fit in a corresponding hexagonal cavity 111 of the bristle part 11. Moreover, each column 113 has a protrusion 115 to clutch in a round rail 141 formed on the clicking ring 14 to make the clipping of the bristle part 11 to the clicking ring 14. As such, the bristle part 11 can be more securely mounted to the connection mechanism. In this embodiment, the cover 17 also serves as a vibrator to shield on the connection bolt 16 as well as vibrates the bristle part 11 for brushing teeth via a driving shaft 21. Further, the button

19 is moveably mounted to the housing 12 by locating the spring 18 under the button 19 to provide resilient force after the button 19 is pressed. The button 19 has a plurality of hook portions 191 to hook in the corresponding slots 127 formed in the recess 121 of the housing 12. At a normal state, the spring 18 stands on the top of the cover 17 and pushes the button 19 outward. Therefore, the bristle part 11 can be easily mounted to the housing through the engagement of the protrusions 115 of the columns 113 and the round rail 141 of the clicking ring 14. In order to dismantle the bristle part 11, it only needs to press the button 19 to let the hook portions 191 push on the bristle part 11, such that the bristle part 11 is dismantled from the housing 12.

[0014] Accordingly, a tooth brush with replaceable bristles is completed by the above-described assembly.

[0015] This disclosure provides exemplary embodiments of the present invention. The scope of this disclosure is not limited by these exemplary embodiments. Numerous variations, whether explicitly provided for by the specification or implied by the specification, such as variations in shape, structure, dimension, type of material or manufacturing process may be implemented by one of skill in the art in view of this disclosure.